

CHAPTER 5

WATER QUALITY PARTNERSHIPS IN THE LOWER ELK RIVER WATERSHED

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5.1. BACKGROUND. The Watershed Approach relies on participation at the federal, state, local and nongovernmental levels to be successful. Two types of partnerships are critical to ensure success:

- Partnerships between agencies
- Partnerships between agencies and landowners

This chapter describes both types of partnerships in the Lower Elk River Watershed. The information presented is provided by the agencies and organizations described.

5.2. FEDERAL PARTNERSHIPS.

5.2.A. Natural Resources Conservation Service. The Natural Resources Conservation Service (NRCS), an agency of the U.S. Department of Agriculture, provides technical assistance, information, and advice to citizens in their efforts to conserve soil, water, plant, animal, and air resources on private lands.

Performance & Results Measurement System (PRMS) is a Web-based database application providing USDA Natural Resources Conservation Service, conservation partners, and the public fast and easy access to accomplishments and progress toward strategies and performance. The PRMS may be viewed at <http://prms.nrcs.usda.gov/prms>. From the opening menu, select "Reports," then select the Conservation Treatment of interest on the page that comes up. Select the desired location and time period from the drop down menus and choose "Refresh." Choose "by HUC" in the "Location" option and choose "Refresh" again.

The data can be used to determine broad distribution trends in service provided to customers by NRCS conservation partnerships. These data do not show sufficient detail to enable evaluation of site-specific conditions (e.g., privately-owned farms and ranches) and are intended to reflect general trends.

CONSERVATION PRACTICE	TOTAL
Comprehensive Nutrient Management Plans (Number)	2
Conservation Buffers (Acres)	51
Erosion Reduction (Tons/Year)	34,116
Inventory and Evaluations (Number)	3
Irrigation Management (Acres)	0
Nutrient Management (Acres)	4,721
Pest Management (Acres)	3,816
Prescribed Grazing (Acres)	1,846
Residue Management (Acres)	2,025
Tree and Shrub Practices (Acres)	114
Waste Management (Number)	1
Wetlands Created, Restored, or Enhanced (Acres)	50
Wildlife Habitat (Acres)	319

Table 5-1. Landowner Conservation Practices in Partnership with NRCS in the Tennessee Portion of Lower Elk River Watershed. Data are from PRMS for October 1, 2001 through September 30, 2002 reporting period. More information is provided in Lower Elk-Appendix V.

5.2.B. United States Geological Survey Water Resources Programs – Tennessee District. The U.S. Geological Survey (USGS) provides relevant and objective scientific studies and information for public use to evaluate the quantity, quality, and use of the Nation's water resources. In addition to providing National assessments, the USGS also conducts hydrologic studies in cooperation with numerous Federal, State, and local agencies to address issues of National, regional, and local concern. Please visit <http://water.usgs.gov/> for an overview of the USGS, Water Resources Discipline.

The USGS collects hydrologic data to document current conditions and provide a basis for understanding hydrologic systems and solving hydrologic problems. In Tennessee, the USGS records streamflow continuously at more than 89 gaging stations equipped with recorders and makes instantaneous measurements of streamflow at many other locations. Ground-water levels are monitored Statewide, and the physical, chemical, and biologic characteristics of surface and ground waters are analyzed. USGS activities also include the annual compilation of water-use records and collection of data for National baseline and water-quality networks. National programs conducted by the USGS include the National Atmospheric Deposition Program (<http://bqs.usgs.gov/acidrain/>), National Stream Quality Accounting Network (<http://water.usgs.gov/nasqan/>), and the National Water-Quality Assessment Program (<http://water.usgs.gov/nawqa/>).

USGS Water Resources Information on the Internet. Real-time and historical streamflow, water levels, and water-quality data at sites operated by the Tennessee District can be accessed at <http://waterdata.usgs.gov/tn/nwis/nwis>. Data can be retrieved by county, hydrologic unit code, or major river basin using drop-down menus. Contact Donna Flohr at (615) 837-4730 or dflohr@usgs.gov for specific information about streamflow data.

Recent publications by the USGS staff in Tennessee can be accessed by visiting <http://tn.water.usgs.gov/pubpg.html>. This web page provides searchable bibliographic information to locate reports and other products about specific areas.

5.2.C. U.S. Fish and Wildlife Service. The mission of the U.S. Fish and Wildlife Service is working with others to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people. Sustaining our nation's fish and wildlife resources is a task that can be accomplished only through the combined efforts of governments, businesses, and private citizens. The U.S. Fish and Wildlife Service (Service) works with State and Federal agencies and Tribal governments, helps corporate and private landowners conserve habitat, and cooperates with other nations to halt illegal wildlife trade. The Service also administers a Federal Aid program that distributes funds annually to States for fish and wildlife restoration, boating access, hunter education, and related projects across America. The funds come from Federal excise taxes on fishing, hunting, and boating equipment.

Endangered Species Program. Through the Endangered Species Program, the Service consults with other federal agencies concerning their program activities and their effects on endangered and threatened species. Other Service activities under the Endangered Species Program include the listing of rare species under the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended: 16 U.S.C. 1531 et seq.) and the recovery of listed species. Once listed, a species is afforded the full range of protections available under the ESA, including prohibitions on killing, harming or otherwise taking a species. In some instances, species listing can be avoided by the development of Candidate Conservation Agreements, which may remove threats facing the candidate species, and funding efforts such as the Private Stewardship Grant Program. For a complete listing of endangered and threatened species in the Lower Elk River watershed, please visit the Service's website at <http://www.cookeville.fws.gov>.

Recovery is the process by which the decline of an endangered or threatened species is stopped and reversed, and threats to the species' survival are eliminated, so that long-term survival in nature can be ensured. The goal of the recovery process is to restore listed species to a point where they are secure and self-sustaining in the wild and can be removed from the endangered species list. Under the ESA, the Service and National Marine Fisheries Service were delegated the responsibility of carrying out the recovery program for all listed species. The Service is actively involved in the captive propagation and reintroduction of the Boulder darter (*Etheostoma wapiti*) in the Lower Elk River watershed. We have also completed several habitat restoration efforts for this species.

In a partnership with the Tennessee Nature Conservancy (TNC), Tennessee Wildlife Resources Agency (TWRA), and Tennessee Department of Environment and Conservation (TDEC) Division of Natural Heritage, the Service is developing a State Conservation Agreement for Cave Dependent Species in Tennessee (SCA). The SCA targets unlisted but rare species and protects these species through a suite of proactive conservation agreements. The goal is to preclude the need to list these species under the ESA. This agreement will cover middle and eastern Tennessee and will benefit water quality in many watersheds within the State.

In an effort to preclude the listing of a rare species, the Service engages in proactive conservation efforts for unlisted species. The program covers not only formal candidates but other rare species that are under threat. Early intervention preserves management options and minimizes the cost of recovery.

Partners for Fish and Wildlife Program. The U.S. Fish and Wildlife Service established the Partners for Fish and Wildlife Program to restore historic habitat types which benefit native fishes and wildlife. The program adheres to the concept that restoring or enhancing habitats such as wetlands or other unique habitat types will substantially benefit federal trust species on private lands by providing food and cover or other essential needs. Federal trust species include threatened and endangered species, as well as migratory birds (e.g. waterfowl, wading birds, shorebirds, neotropical migratory songbirds).

Participation is voluntary and various types of projects are available. Projects include livestock exclusion fencing, alternate water supply construction, streambank stabilization, restoration of native vegetation, wetland restoration/enhancement, riparian zone reforestation, and restoration of in-stream aquatic habitats.

How To Participate:

- Interested landowners contact a "Partners for Fish and Wildlife" Biologist to discuss the proposed project and establish a site visit.
- A visit to the site is then used to determine which activities the landowner desires and how those activities will enhance habitat for trust resources. Technical advice on proposed activities is provided by the Service, as appropriate.
- Proposed cost estimates are discussed by the Service and landowner.
- A detailed proposal which describes the proposed activities is developed by the Service biologist and the landowner. Funds are competitive, therefore the

proposal is submitted to the Service's Ecosystem team for ranking and then to the Regional Office for funding.

- After funding is approved, the landowner and the Service co-sign a Wildlife Extension Agreement (minimum 10-year duration).
- Project installation begins.
- When the project is completed, the Service reimburses the landowner after receipts and other documentation are submitted according to the Wildlife Extension Agreement.

For more information regarding the Endangered Species and Partners for Fish and Wildlife programs, please contact the Cookeville Ecological Services Field Office at 931/528-6481 or visit their website at <http://www.cookeville.fws.gov>.

5.2.D. Tennessee Valley Authority (TVA). TVA is encouraging watershed landowners to improve/protect stream riparian zones. Watersheds that are being targeted have streams listed on the 303(d) list. As a partner TVA is supplying fencing and native plants through the NRCS districts to land owners that are willing to create riparian areas along streams that live stock have had free range.

TVA supports two stakeholder coalitions in the Lower Elk River Watershed. Friends of the Elk River located in Fayetteville, TN sponsors the annual Elk River Watershed Festival that is held in the spring. This is a non-point source educational event targeted to the landowners in the Lower Elk River Watershed. Richland Creek Environmental Council is an agricultural community organization that manages and educates landowners about the benefits of Best Management Practices in the Richland Creek Watershed.

Lower Elk River Improvements. TVA is currently in the process of upgrading canoe access sites on the Elk River. The upgrades consists of repairing eroded stream banks at the access sites, graveling parking lots and closing off areas that are used for dumps.

For further information please contact <http://www.tva.com> or 1-800-TVA-LAND.

5.3. STATE PARTNERSHIPS.

5.3.A. TDEC Division of Water Supply. The Source Water Protection Program, authorized by the 1996 Amendments to the Safe Drinking Water Act, outline a comprehensive plan to achieve maximum public health protection. According to the plan, it is essential that every community take these six steps:

- 1) Delineate the drinking water source protection area
- 2) Inventory known and potential sources of contamination within these areas
- 3) Determine the susceptibility of the water supply system to these contaminants
- 4) Notify and involve the public about threats identified in the contaminant source inventory and what they mean to their public water system

- 5) Implement management measures to prevent, reduce or eliminate threats
- 6) Develop contingency planning strategies to deal with water supply contamination or service interruption emergencies (including natural disaster or terrorist activities).

Source water protection has a simple objective: to prevent the pollution of the lakes, rivers, streams, and ground water (wells and springs) that serve as sources of drinking water before they become contaminated. This objective requires locating and addressing potential sources of contamination to these water supplies. There is a growing recognition that effective drinking water system management includes addressing the quality and protection of the water sources.

Source Water Protection has a significant link with the Watershed Management Program goals, objectives and management strategies. Watershed Management looks at the health of the watershed as a whole in areas of discharge permitting, monitoring and protection. That same protection is important to protecting drinking water as well. Communication and coordination with a multitude of agencies is the most critical factor in the success of both Watershed Management and Source Water Protection.

Watershed management plays a role in the protection of both ground water and surface water systems. Watershed Management is particularly important in areas with karst {limestone characterized by solution features such as caves and sinkholes as well as disappearing streams and spring} since the differentiation between ground water and surface water is sometimes nearly impossible. What is surface water can become ground water in the distance of a few feet and vice versa.

Source water protection is not a new concept, but an expansion of existing wellhead protection measures for public water systems relying on ground water to now include surface water. This approach became a national priority, backed by federal funding, when the Safe Drinking Water Act amendments (SDWA) of 1996 were enacted. Under this Act, every public drinking water system in the country is scheduled to receive an assessment of both the sources of potential contamination to its water source of the threat these sources may pose by the year 2003 (extensions are available until 2004). The assessments are intended to enhance the protection of drinking water supplies within existing programs at the federal, state and local levels. Source water assessments were mandated and funded by Congress. Source water protection will be left up to the individual states and local governments without additional authority from Congress for that progression.

As a part of the Source Water Assessment Program, public water systems are evaluated for their susceptibility to contamination. These individual source water assessments with susceptibility analyses are available to the public at <http://www.state.tn.us/environment/dws> as well as other information regarding the Source Water Assessment Program and public water systems.

For further discussion on ground water issues in Tennessee, the reader is referred to the Ground Water Section of the 305b Water Quality Report at <http://www.state.tn.us/environment/water.htm>. The intent of this report is to provide the public with an overall characterization of ground water quality and hydrogeology for Tennessee.

5.3.B. TDEC Division of Community Assistance. The Division of Community Assistance administers the state's Clean Water State Revolving Fund Program. Amendment of the Federal Clean Water Act in 1987 created the Clean Water State Revolving Fund (SRF) Program to provide low-interest loans to cities, counties, and utility districts for the planning, design, and construction of wastewater facilities. The U.S. Environmental Protection Agency awards annual capitalization grants to fund the program and the State of Tennessee provides a twenty-percent funding match. The Division of Community Assistance has awarded loans totaling approximately \$550 million since the creation of the SRF Program. SRF loan repayments are returned to the program and used to fund future SRF loans.

SRF loans are available for planning, design, and construction of wastewater facilities, or any combination thereof. Eligible projects include new construction or upgrading/expansion of existing facilities, including wastewater treatment plants, pump stations, force mains, collector sewers, interceptors, elimination of combined sewer overflows, and nonpoint source pollution remedies.

SRF loan applicants must pledge security for loan repayment, agree to adjust user rates as needed to cover debt service and fund depreciation, and maintain financial records that follow governmental accounting standards. SRF loan interest rates range from zero percent to market rate, depending on the community's per-capita income, taxable sales, and taxable property values. Most SRF loan recipients qualify for interest rates between 2 and 4 percent. Interest rates are fixed for the life of the term of the loan. The maximum loan term is 20 years or the design life of the proposed wastewater facility, whichever is shorter.

The Division of Community Assistance maintains a Priority Ranking System and Priority List for funding the planning, design, and construction of wastewater facilities. The Priority Ranking List forms the basis for funding eligibility determinations and allocation of Clean Water SRF loans. Each project's priority rank is generated from specific priority ranking criteria and the proposed project is then placed on the Project Priority List. Only projects identified on the Project Priority List may be eligible for SRF loans. The process of being placed on the Project Priority List must be initiated by a written request from the potential SRF loan recipient or their engineering consultant. SRF loans are awarded to the highest priority projects that have met SRF technical, financial, and administrative requirements and are ready to proceed.

Since SRF loans include federal funds, each project requires development of a Facilities Plan, an environmental review, opportunities for minority and women business participation, a State-approved sewer use ordinance and Plan of Operation, and interim construction inspections.

For further information about Tennessee's Clean Water SRF Loan Program, contact the Division of Community Assistance by telephone at (615) 532-0445 or visit their Web site at <http://www.state.tn.us/environment/dca>.

5.3.C. Tennessee Department of Agriculture. The Tennessee Department of Agriculture's Water Resources Section consists of the federal Section 319 Nonpoint Source Program and the Agricultural Resources Conservation Fund Program. Both of these are grant programs which award funds to various agencies, non-profit organizations, and universities that undertake projects to improve the quality of Tennessee's waters and/or educate citizens about the many problems and solutions to water pollution. Both programs fund projects associated with what is commonly known as "nonpoint source pollution."

The Tennessee Department of Agriculture's Nonpoint Source Program (TDA-NPS) has the responsibility for management of the federal Nonpoint Source Program, funded by the US Environmental Protection Agency through the authority of Section 319 of the Clean Water Act. This program was created in 1987 as part of the reauthorization of the Clean Water Act, and it established funding for states, territories and Indian tribes to address NPS pollution. Nonpoint source funding is used for installing Best Management Practices (BMPs) to stop known sources of NPS pollution, training, education, demonstrations and water quality monitoring. The TDA-NPS Program is a non-regulatory program, promoting voluntary, incentive-based solutions to NPS problems. The TDA-NPS Program basically funds three types of programs:

- **BMP Implementation Projects.** These projects aid in the improvement of an impaired waterbody, or prevent a non-impaired water from becoming listed on the 303(d) List.
- **Monitoring Projects.** Up to 20% of the available grant funds are used to assist the water quality monitoring efforts in Tennessee streams, both in the state's 5-year watershed monitoring program, and also in performing before-and-after BMP installation, so that water quality improvements can be verified. Some monitoring in the Lower Elk River Watershed was funded under an agreement with the Tennessee Department of Agriculture, Nonpoint Source Program, and the U.S. Environmental Protection Agency Assistance Agreements C9994674-99-0, C9994674-00-0, and C9994674-01-0.
- **Educational Projects.** The intent of educational projects funded through TDA-NPS is to raise the awareness of landowners and other citizens about practical actions that can be taken to eliminate nonpoint sources of pollution to the waters of Tennessee.

The Tennessee Department of Agriculture Agricultural Resources Conservation Fund Program (TDA-ARCF) provides cost-share assistance to landowners across Tennessee to install BMPs that eliminate agricultural nonpoint source pollution. This assistance is provided through Soil Conservation Districts, Resource Conservation and Development Districts, Watershed Districts, universities, and other groups. Additionally, a portion of the TDA-ARCF is used to implement information and education projects statewide, with the focus on landowners, producers, and managers of Tennessee farms and forests.

Participating contractors in the program are encouraged to develop a watershed emphasis for their individual areas of responsibility, focusing on waters listed on the Tennessee 303(d) List as being impaired by agriculture. Current guidelines for the

TDA-ARCF are available. Landowners can receive up to 75% of the cost of the BMP as a reimbursement.

Since January of 1999, the Department of Agriculture and the Department of Environment and Conservation have had a Memorandum of Agreement whereby complaints received by TDEC concerning agriculture or silviculture projects would be forwarded to TDA for investigation and possible correction. Should TDA be unable to obtain correction, they would assist TDEC in the enforcement against the violator. More information about the joint policy to address Bad Actors in forestry operations is available at <http://www.state.tn.us/environment/news/release/jan99/badact.htm>

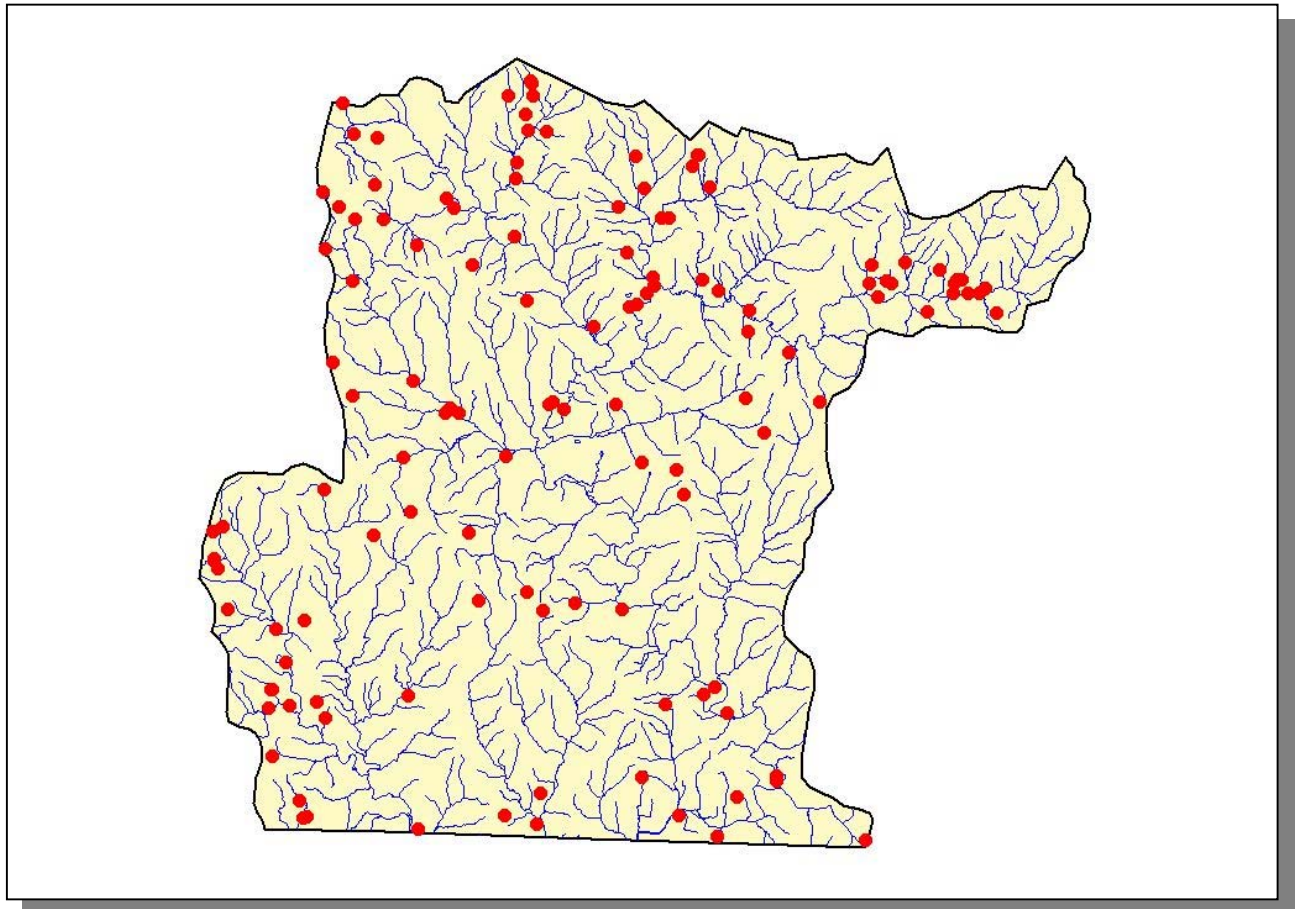


Figure 5-1. Location of BMPs installed from 1999 through 2002 in the Tennessee Portion of the Lower Elk River Watershed with Financial Assistance from the Tennessee Department of Agriculture's Nonpoint Source and Agricultural Resources Conservation Fund Grant Programs.

5.3.D. Alabama Department of Environmental Management. Alabama has a long history of water quality partnerships in the Tennessee River Basin. The most recent development affecting the role and depth of such efforts within the Valley include the creation of the Alabama Clean Water Partnership (CWP). The CWP is a coalition of public and private individuals, companies, organizations and governing bodies working together to protect and preserve water resources and aquatic ecosystems. The CWP

has a presence in the Lower Elk Hydrologic Unit through the Tennessee River Basin Clean Water Partnership Steering Committee and sub-basin committees. Like similar committees established throughout the other river basins of the State, the CWP efforts in the Lower Elk Hydrologic Unit are focused on the development of new partnerships and the funding to support water quality projects.

The CWP is currently working closely with the Alabama Department of Environmental Management to facilitate stakeholder-led, long-term water quality planning efforts and to develop watershed management plans by river basin and to develop specific restoration plans for impaired waterbodies. These planning efforts will help target waterbodies and watersheds for concentrated efforts in future years.

At the time of this report, no lasting partnerships or watershed projects have emerged in the Lower Elk although citizen concern for environmental issues is growing. One of the goals of the CWP is to nurture developing partnerships and assist in the development and funding of beneficial water quality projects. With time, the Lower Elk Hydrologic Unit should benefit from the same types of activities that have developed in the Gunterville Lake, Wheeler Lake, Pickwick Lake and Bear Hydrologic Units.

For more information concerning Clean Water Partnership activities in the Tennessee Valley of Alabama, contact Vicky Mitchell, Basin Facilitator by phone at (256) 353-6146 x2, or by E-mail: sobroke@aol.com.

For information regarding Clean Water Partnership activities elsewhere in Alabama, you may contact the ADEM website <http://www.adem.state.al.us>, the Clean Water Partnership website <http://www.cleanwaterpartnership.org> or call Allison Newell, Statewide ACWP Coordinator at 1-888-3 Got H2O.

5.4. LOCAL INITIATIVES.

5.4.A. Friends of the Elk River. The group was organized in 1998 with monthly meetings to discuss manageable projects to benefit the river and citizens of Lincoln County who live in the watershed. This is not an agency that must meet certain legal requirements, but a group of concerned citizens hoping to keep residents aware of the need for clean streams and watersheds. The group meets on a regular monthly basis with additional meetings when needed.

Mission Statement: To improve and protect the natural resources of the Elk River through the cooperative efforts of local government, businesses, organizations, state and federal agencies, and general citizens.

Projects have included:

- Design and distribution of a promotional brochure with a map and facts about the river.
- Access points upgrade. New steps and slides to facilitate getting canoes into and out of the river. All this was volunteer work done by members of Friends of the Elk River using large equipment and tools owned by members.

- Access points cleanup. Partner with the Sheriff's Litter Crew for regular maintenance and litter collection.
- Provided large vandal-proof cages around metal barrels for litter collection at three of the sites.
- Three large cleanup projects:
 1. One project included 25 miles of river with one group of volunteers in canoes who cleaned the water; several groups on the banks collected litter and debris.
 2. One project focused on an especially bad illegal dump at the city limits on the river.
 3. One project centered on Norris Creek, which runs through the city and flows into the Elk River. The group removed an unusually large amount of debris because this had once been a commercial site where the creek was used for disposal.
- Canoe trip sponsored by local canoe rental businesses open to the public for the purposes of surveying needs along the river such as erosion, litter, fallen trees, and problems with water levels.
- Great American Cleanup participation. FOER has been winners of a top award for three years.
- Watershed Festival. Currently planning the second annual event. In 2002, FOER held the festival at the Lincoln County Fairground exhibit building. Approximately 200 people attended and 20+ exhibits were available. Agencies and groups participating included Tennessee Wildlife Resources Agency, Tennessee Forestry, Tennessee Department of Environment and Conservation, Wild Ducks Unlimited., UT Extension Service, 4-H Club, Interlocal Solid Waste Authority, Tennessee Valley Authority, Natural Resources Conservation Service, C.L.E.A.N., Inc., Sportsmen's Clubs, Elk River Canoe Rental, Kelso Canteen and Canoe Rental, and several private exhibitors. Partnerships have included the above agencies and the local emergency management agency, Boy Scouts, Flint River Conservancy, and local canoe and rental businesses.
- Exhibits at Lincoln County Fair, America Recycles Day, local business expo, and Non-Point Pollution workshop at Motlow College.

For more information, contact the Friends of the Elk River at:

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